



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,949	10/21/2003	Yoshiaki Akazawa	468-40	3299

23117 7590 03/14/2006

NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

DOE, JANIS L

ART UNIT	PAPER NUMBER
----------	--------------

1756

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/688,949

Applicant(s)

AKAZAWA ET AL.

Examiner

Janis L. Dote

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) 2-5 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-5 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1756

1. Applicants' election of the invention of Group I, claim 1, in the reply filed on Mar. 2, 2006, is acknowledged. Because applicants did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 2-5 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on Mar. 2, 2006.

3. This application is in condition for allowance except for the following formal matters set forth in paragraph 4 infra.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

4. The disclosure is objected to because of the following informalities:

(1) The use of trademarks, e.g., Henschel mixer [sic: HENSCHEL MIXER] at page 6, lines 7-8, has been noted in this

application. The trademarks should be capitalized wherever they appear and be accompanied by the generic terminology. This example is not exhaustive. Applicants should review the entire specification for compliance.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

(2) Table 2 at page 13 of the specification reports that the layer thicknesses of the fixed images in comparative examples 3 and 4 are $3.6\text{ }\mu\text{m}$ and $7.2\text{ }\mu\text{m}$, respectively. However, the layer thicknesses meet the relationship recited in instant claim 1, and the image-forming methods exemplified in comparative examples 3 and 4 meet the steps recited in instant claim 1. (According to the specification, the toners in comparative examples 3 and 4 have a bulk density (A) of 0.4 g/cm^3 and a true specific gravity (ρ) of 1.1 g/cm^3 . The toner deposition amount (M) of the formed images was 0.3 mg/cm^2 . Therefore, $10M/\rho = 2.7\text{ }\mu\text{m}$ and $10M/A = 7.5\text{ }\mu\text{m}$.) Thus, it is not clear what is applicants' invention.

Appropriate correction is required.

Art Unit: 1756

5. Claim 1 is allowable over the prior art of record.

Japanese Patent 06-230602 (JP'602) discloses an image-forming method of forming a magnetic image with a particular magnetic toner on a printing medium, where the image has a height or layer thickness (h_1), and fixing said image on said medium, where the fixed image has a height or layer thickness (h_2). JP'602 teaches that the heights h_1 and h_2 satisfy the condition of $2 \leq h_1/h_2 \leq 10$. See the Japanese Patent Office (JPO) English-language abstract and the machine-assisted translation, paragraphs 0014-0018. However, JP'602 does not teach or suggest that its fixed toner image has a layer thickness that satisfies the condition recited in instant claim 1, $10M/\rho \leq h \leq 10M/A$, where M is the deposited amount (mass per unit area, i.e., mg/cm^2) of toner in the formed image, ρ is the true specific gravity of the toner, A is the bulk density of the toner, and h is the toner layer thickness of the fixed image. Nor is there sufficient information in the reference to reasonably presume that the JP'602 fixed toner image has a layer thickness that satisfies the condition recited in instant claim 1. JP'602 does not disclose or suggest what is the bulk density or the true specific gravity of its magnetic toner. Nor does JP'602 disclose or suggest that the amount of the toner in

Art Unit: 1756

the image layer is 4 mg/cm^2 or less as recited in instant claim 1. See the translation, paragraphs 0040-0047.

US 5,139,914 (Tomiya) teaches an image-forming method of forming an image with a particular magnetic toner on a recording medium and fixing the image on the recording medium. See Fig. 5 and col. 19, lines 40-61. According to Tomiyama, the magnetic toner comprises spherical toner particles having a particular average particle size and volume resistivity. Col. 3, lines 58-62. Tomiyama further discloses that the magnetic toner has a bulk density of $0.4\text{-}0.52 \text{ g/cm}^3$ and a true density of $1.45\text{-}1.8 \text{ g/cm}^3$ "so as to provide a good resolution and cause little fog." Col. 6, lines 50-55. However, Tomiyama does not teach or suggest that its fixed toner image has a layer thickness that satisfies the condition recited in instant claim 1. Nor is there sufficient information in the reference to reasonably presume that the Tomiyama fixed toner image has a layer thickness that satisfies the condition recited in instant claim 1. Tomiyama does not disclose or suggest what is the layer thickness of the fixed toner image. Nor does Tomiyama teach or suggest that the amount of toner in the image layer is 4 mg/cm^2 or less as recited in instant claim 1.

Art Unit: 1756


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, Mr. Nam Nguyen, can be reached on (571) 272-1342. The central fax phone number is (571) 273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLD
Mar. 11, 2006


JANIS L. DOTE
PRIMARY EXAMINER
GROUP 1500
1700